

CBI PROPOSAL PREPARATION GUIDELINES

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4. Proposal document
 - a. Title
 - b. Principal Investigator and contact information
 - c. Proposal Summary
 - i. Acceptable length
 - ii. Information to include
 - iii. Objectives (relate them to Key Performance Indicators in [CBI Technical Roadmap](#))
 - d. Keywords
 - i. Acceptable words
 - ii. Reasoning and usefulness
 - e. Total CBI cost and cost share (do not need to detail here) and duration of project
 - f. Abstract and graphic
 - g. Introduction
 - i. What to include and general guidelines
 - ii. Preliminary experiments (if applicable)
 1. If preliminary experiments have been conducted please add as an additional titled section.
 - h. Technical Discussion of Work
 - i. Project plan
 - ii. General guidelines for this section
 - i. Breakdown of Budget and Cost Share
 - i. Guidelines for calculating cost share
 - ii. Advice
 - iii. Duration of Project
 - j. Literature reference guidelines
 - k. Experience: Curriculum Vitae or Resumé
 - l. Supporting Information (if necessary)

**THESE SECTIONS SHOULD
FIT ON ONE PAGE**

GENERAL GUIDELINES

Advice for writing a proposal for CBI

1. CBI funds pre-competitive research for lead batteries. Precompetitive is underlined, because that is the mainstay of the organization and proposals that feature material that is obviously competitive (i.e. the body of work only benefits your organization) in nature will not be acceptable.
2. Write your proposal with the idea that the person reviewing may not be an expert in a specific technique, methodology, or subject like you are. Ultimately the proposals are reviewed first by a panel of experts (in some area of lead battery science) and then by technical representatives of the CBI membership. This is your audience, write to them! Many are fully aware of the science and engineering involved for lead batteries, but might not know much of your expertise.
 - a. You must convey what the state-of-the-art is for your proposal. If you are suggesting a new additive, in your introduction there should be a firm and referenced recount from literature providing precedent and reason to your work.
3. Construct your proposal to sell what you would like to do in the first 2 pages, the rest of the proposal is for detail.
4. Preliminary experiments are a huge plus.
 - a. If you are looking to use a technique that has never been used for lead batteries, initial experiments will help demonstrate that it your work is possible.
 - b. Precedent builds trust.
 - c. Refer to your experience and accomplishments in similar projects (this should be accentuated in the CV and background experience section.)
5. Refer to the innovation roadmap, please use the key performance indicators as a guide to how your work can provide insight or a solution to a problem.
6. Gather a team, there are many leading institutions and companies in lead battery research. You may not know everything about lead battery science, and a team conveys that the proposal will be handled thoroughly and via a multi-disciplinary approach.

PROPOSAL PROCESS

Please submit all proposals to matt.raiford@batteryinnovation.org

In general, the proposals are due six weeks after issuing of a request. Following receipt of your proposal, a panel of experts will review the documents and ask for additional clarification. After this period, the proposals will be circulated and reviewed by CBI membership.

REVIEW PROCESS

As mentioned above, the review process includes an expert panel that will measure your proposal based on each of their individual expertise as a lead battery scientist and grasp of lead battery research. Following their suggestions, the proposals are sent for scoring and ranking by CBI members.

The rankings will be discussed and then principal investigators will be contacted with the status of their proposal.

PROPOSAL DOCUMENT

Generic rules for proposals

1. The proposal must be understandable, please proof-read for clarity and legibility. There are professional reviewers (e.g. [American Journal Experts](#)) that are a cost-effective way (~\$400) to get valuable improvements overall, especially for the proposal summary.
2. Please use either Arial, Calibri, or Times New Roman, 12 font, single spaced, single columned.
3. Please include page numbers.
4. Literature references should be at the end of the proposal, started on a new page.

One-page summary

These sections should be included on a one-page summary of the proposal.

1. Title – do not make this a paragraph. The title should describe the approach and subject, not the objectives.
2. Principal investigator and contact info
 - a. Example:
Matthew Raiford, matt.raiford@batteryinnovation.org
Consortium for Battery Innovation
1000 Park Forty Plaza, Suite 130,
Durham, NC 27713
3. Proposal summary
 - a. The summary should convey the innovation and goal for your proposal. In terms of the innovation be direct in what your proposal aims to do to improve lead battery performance.
 - b. Include objectives for your proposal as a bulleted list within the summary. Save technical detail for the proposal.
4. Keywords
 - a. What applications (if any) are you focusing on? Automotive batteries? Industrial?
 - b. What performance indicators from the roadmap will be improved?
 - c. Techniques used
5. Duration and financial info

- a. Please list:
 - i. Duration of project
 - ii. Cost for CBI and any cost share that you will provide.

Body of work

For the rest of the proposal include technical detail about your innovation. If you use terms or acronyms specific to the discipline or techniques utilized, please define them. Make sure to caption, number, and describe figures, graphics, and any tables.

Introduction

1. The introduction should provide a technical background for the area of lead battery science that is the focus of your proposal (i.e. negative active material additives, *in situ* studies, materials science of the phases, etc.) This section should be supported by research in journal articles, conferences, patents, etc. Make sure to summarize what the state-of-the-art is for the subject, what is currently being done.
2. Cover the background of any specific technique or method that you are bringing into the work. Not from the basis of how the technique works, but why the technique may be useful and any similar precedence in the literature.
3. **PRELIMINARY EXPERIMENTS**
 - a. In the case of utilizing a new method or technique to lead battery science, **conducting preliminary experiments is a major advantage to the proposal.** These would be proof-of-concept type of experiments that describe validity and probability of success for your innovation.
 - b. This is not restricted to more fundamental science-based work. For instance, if exploring a new type of lead battery electrode, initial electrical testing in test cells or electrochemical evaluation could be preliminary experiments.

Technical Discussion of Work

Ultimately, the innovative aspects and technical details of your proposal should be organized effectively.

1. Describe your thought process, why you think your proposal could help the performance of lead batteries.
2. Please include graphics and figures that describe important steps of your work plan.
3. A work plan **must** be included showing a timeline for deliverables and major milestones in the program.
 - a. For instance, a Gantt chart can be effective (just an example).

Duration, Budget, Cost Share

1. Duration
 - a. Please choose an appropriate duration for the work and describe in the work plan why the project will take so long.
2. Budget
 - a. Please outline all of the costs of the project in detail.
 - i. Labor, materials, instrument time, **travel**, outside testing (if applicable), overhead, etc.
3. Cost share
 - a. CBI is a non-profit organization that funds pre-competitive research for lead battery science and any cost share is a major plus.
 - b. This can be calculated by describing labor or facilities that will be utilized that won't be a cost to CBI.
 - i. In the case of university-based proposal teams, time from assisting faculty and staff, instrument use that is "in-house", etc.

Literature Referencing Guidelines

Please use the same format for the references, American Chemical Society, Elsevier, and other formats are acceptable. Please include the DOI or link for your resources.

Experience

In this section you would describe the experience of every person involved in the project, their company or institution and include a curriculum vitae and/or resumé for each contributor. Also, for industrial partners or co-leaders, please add contact info.

Try to specify how the team experience and expertise will strengthen the probability of success for the proposal.

Supporting Information

If the introductory or technical work sections feature lengthy data sets, please include a representative piece of data in the proposal and include the rest of the data in a supporting information section.